

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of:)
Request of PacTel Paging for a)
Pioneer's Preference Respecting)
the Ground-to-Air Paging Service)

File No.

PP-39

Federal Communications Commission
Office of the Secretary

ET 92-100

To: Chief Engineer, Office of Engineering & Technology

REQUEST FOR PIONEER'S PREFERENCE

PacTel Paging ("PacTel"), by its attorneys and pursuant to Sections 1.402 and 1.403 of the Commission's rules, hereby requests a Pioneer's Preference in the licensing process for the Ground-to-Air Paging ("GAP") service that PacTel Paging has proposed by separate petition for rulemaking. The following is respectfully shown:

1. In its Report and Order in General Docket No. 90-217, FCC-91-112, released May 13, 1991 (the "Preference Order"), the Commission adopted rules that provide preferential treatment in its licensing processes for parties requesting spectrum allocation rule changes who have made a significant contribution to the development of new communications services and technologies. PacTel Paging requests such a preference in connection with the licensing process for GAP.

2. Attachment 1 hereto is a copy of the Petition for Rulemaking (the "Petition") filed by PacTel with respect to GAP. The Petition contains detailed information concerning PacTel's proposal respecting the nature of the service, the

frequencies to be used, and the necessary and appropriate licensing policies. The Petition also describes the work PacTel has done, and will continue to do, to develop the GAP service and the technology necessary to implement it successfully. As is set forth in greater detail below, PacTel submits that it satisfies the applicable criteria for receiving a Pioneer's Preference.

3. The Commission's Preference Order requires that an entity seeking a preference file a rulemaking petition requesting either that spectrum be allocated to its proposed service or that the rules be amended to accommodate its new technology. PacTel has satisfied this threshold requirement. As reflected in Attachment 1, PacTel has petitioned the Commission to allocate three 25 kHz channels from the 930-931 MHz reserve to the proposed GAP service.

4. The Commission has indicated that "the key determinate of whether a Pioneer's Preference would be awarded is the degree to which a proposed service...is 'new' or 'novel'...." Preference Order at para. 43. Here, PacTel has drawn upon its experience as a major provider of paging services throughout the country, and as a provider of air-ground radio telephone service in the 450 MHz band, to conceive and propose a novel service which fills an important gap in the communications link between ground-based individuals and airborne individuals. Specifically, the proposal overcomes the fact that, for practical and operational reasons, existing

air-ground radio telephone services are generally mobile-originated services only. Subscribers who received pages while in flight could then utilize the regular air-ground radio telephone airborne units (which are being found with increasing regularity on commercial aircraft) to respond to the page and thereby complete the important communication.

5. The proposed GAP service would fill the same complementary need with respect to the air-ground radio telephone service as traditional paging fulfills for land-based travellers who must rely upon pay phones to keep in touch. For decades, persons whose business requires road trips have relied upon pagers and pay telephones to keep in touch while they are in transit. With the allocation of new spectrum to air-ground service for use on commercial airlines, there will now be "pay phones" in the sky. A correlative paging service is needed to encourage the most efficient use of this airborne communications capability. The ground-to-air paging link completes the communications loop, and thus improves and enhances the ability of service providers to meet important needs of airborne subscribers. To the best of its knowledge, PacTel is an innovator with respect to this proposal, since it knows of no other party who has proposed an allocation to create a service of this nature.

6. The Commission has indicated it will award a Pioneer's Preference to an entity that demonstrates that it "has developed an innovative proposal that leads to the

establishment of a service not currently provided or a substantial enhancement of an existing service, provided, that the rules adopted for the new or existing service are a reasonable outgrowth of the proposal and lend themselves to the grant of a preference and a license to the pioneer." Id. at para. 47. GAP is both a new service and a substantial enhancement of existing services (i.e., traditional air-ground radio telephone and terrestrial paging). Assuming that the rules adopted for this new service are a reasonable outgrowth of PacTel's proposal, the basis for a Pioneer's Preference will have been established.

7. For the purpose of determining the eligibility of a petitioner for a preference, the Commission has indicated it will consider the development of an "innovative proposal" to mean that the petitioner "has brought out the capabilities or possibilities of the technology or service or has brought them to a more advanced or more effective state." Preference Order, paragraph 48. In this regard, the Commission has noted that it will grant a preference "only to persons who have made a significant investment of effort in developing the innovation." Id. at note 10. PacTel qualifies for a preference based upon these criteria. Section V of the Petition sets forth in detail the substantial efforts undertaken by PacTel to coordinate the use of spectrum in the 930-931 MHz band for GAP with the National Telecommunications and Information Administration and the Department of Navy which

are responsible for certain Government radar systems which operate in this frequency range. The Petition also includes a technical report on Navy radar interference with airborne pagers which was commissioned by PacTel to identify and address the prospects for successfully sharing this band. PacTel also has committed, if necessary, to quantify the prospects for interference to airborne pagers from Navy radar operations through the conduct of cooperative tests with the Navy. These efforts demonstrate a significant undertaking by PacTel to bring out the capabilities of GAP.

8. The PacTel Petition for Rulemaking also sets forth in detail the commitment PacTel has made to GAP. Section VI of the Petition describes the developmental work that PacTel already has done to demonstrate the technical feasibility of the proposed service. Specifically, tests performed utilizing authorized 931 MHz range paging transmitters have enabled PacTel to make preliminary findings respecting the system configuration and technical parameters that will be needed to provide the GAP service. Several important discoveries were made:

- ° At power levels presently used in terrestrial paging operations, pages can be received routinely in aircraft from transmission locations up to 250 miles away.

- ° Distant paging signals best enter the windows of the plane rather than the body of the aircraft. As a result, the paging transmitter must be oriented so as to permit the signal to approach the aircraft from the side, rather than from the front, the back or below.
- ° Angles of incidence to the aircraft as small as several degrees may be sufficient to permit reliable penetration of the windows of the aircraft.
- ° High gain antennas designed for terrestrial paging operations are ill-suited to provide GAP. For optimal result, uptilt configurations specifically oriented to send signals skyward are needed.
- ° Paging signals at 900 MHz penetrate the aircraft with some regularity, unlike some other VHF and UHF bands.

9. The PacTel Petition also sets forth in detail the outline of the continuing developmental program that the company is undertaking. PacTel is in the course of pursuing further development in the following important areas:

- ° Techniques for enhanced error correction and bit interleaving to overcome any potential interference.
- ° Techniques for successfully capturing pages from simulcast transmitters separated by hundreds of miles.
- ° Techniques for coordinating the satellite control of the nationwide network.
- ° Techniques for concentrating the radiated power skyward.

- ° Techniques for improving the ability to deliver adequate signals at the proper critical angles to penetrate aircraft.
- ° Techniques for numbering or retransmitting pages on a per subscriber basis to minimize the lost pages.

10. In sum, PacTel has demonstrated that it is a financially secure and technically sophisticated company which has devoted -- and is committed to continuing to devote -- the resources that are necessary to develop the GAP service and to bring it to market.

11. The Commission has specifically concluded that an experimental authorization is not a prerequisite to receiving a Pioneer's Preference. Preference Order, paragraph 39. Here, however, PacTel has engaged in meaningful experimentation, though was able to do so under existing authorizations rather than pursuant to an experimental authorization issued under Part 5 of the Commission's regulations. Moreover, PacTel is a party to another experimental program that, among other things, is intended to develop advanced paging technologies which will ultimately be used in providing GAP service. Attachment 2 hereto is a copy of the report recently submitted to the Commission with reference to the program of experimentation respecting Advanced Architecture Paging ("AAP") that is being conducted by PacTel under the auspices of its ultimate parent, Pacific Telesis Group, pursuant to previously granted experimental authorizations. Several of the advanced

technology experiments being conducted in connection with AAP have a direct bearing upon PacTel's ability to successfully implement GAP. As is noted in PacTel's Petition, the airborne GAP receivers are subject to being illuminated on an intermittent basis by Navy radar operations when passengers carrying the units are on airplanes near coastal areas. The prospects for interference in this situation can be eliminated through the use of advanced signal coding techniques which include bit interleaving and enhanced error correction in the paging protocols used by GAP. PacTel submits, therefore, that the technological advances under development by PacTel to be incorporated in the GAP service justify the award of a Pioneer's Preference.

12. As described in PacTel's Petition for Rulemaking respecting GAP, this is inherently a nationwide service. Because multiple licenses and licensees are contemplated, the award of a Pioneer's Preference to PacTel with respect to one of the GAP channels would not create a nationwide monopoly or otherwise place an undue restriction upon competition. Rather, the Commission would be rewarding PacTel for its efforts in conceiving and fostering the innovative new service, while preserving fair and robust competition. Under these circumstances, PacTel submits that, as the first qualified party filing a petition for rulemaking with respect to this innovative service, it should be entitled to a nationwide preference. This is consistent with the Preference Order which

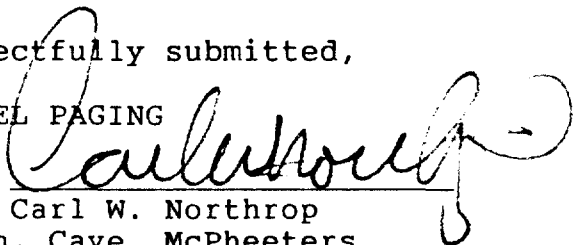
notes that "[w]here a service is inherently nationwide, we will consider granting a nationwide preference." Id. at para. 54.

The foregoing premises having been duly considered, PacTel respectfully submits that it has met all of the criteria which qualify it to receive a Pioneer's Preference, assuming that the Commission adopts rules establishing the ground-to-air paging service which are a reasonable outgrowth of the PacTel proposal.

Respectfully submitted,

PACTEL PAGING

By:


Carl W. Northrop
Bryan, Cave, McPheeters
& McRoberts
700 13th Street, N.W.
Suite 700
Washington, D.C. 20005
(202) 508-6000

Mark A. Stachiw
PacTel Paging
Three Forest Plaza
12221 Merit Drive
Suite 800
Dallas, TX 75251
(214) 458-5200

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ATTACHMENT 1